

Remarks

Claims 1, 4-6, 8-11, 13-24, 49-72, and 74-77 are presented for the Examiner's review and consideration. Claims 9-17 are withdrawn. In this Response, claims 1, 23, 63, 69, and 71 are amended, claims 2-3, 12, and 73 are cancelled, and claims 74-77 are added. Applicant believes the claim amendments and the accompanying remarks herein serve to clarify the present invention and are independent of patentability. No new matter has been added.

35 U.S.C. §112 Rejection

In the Office Action, claims 63 and 69 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. For reasons set forth below, Applicant respectfully submits that this rejection should be withdrawn.

The rejection states that there is insufficient antecedent basis for "the object" to be recited as a structural element, in claims 63 and 69. Applicants respectfully submit that, prior to amendment herein, claims 63 and 69 merely further defined the object to which the invention may be directed, and thus did not define "the object" as a structural element. However, to advance prosecution of the application, Applicant has amended claims 63 and 69 in accordance with the rejection.

In light of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the section §112 rejection.

35 U.S.C. §103 Rejection

The following claims were rejected under 35 U.S.C. §103(a), as being unpatentable over the cited references:

Claims 1-8, 19, 24, 50-62, 64-65, 67-68, and 70-73 over Merritt (U.S. Patent No. 5,208,950, "Merritt") in view of Pontaoe (U.S. Patent No. 6,618,910, "Pontaoe");

Claim 20 over Merritt in view of Pontaoe, and further in view of Hart (U.S. Patent No. 5,208,950, "Hart");

Claim 21 over Merritt in view of Pontaoe, and further in view of Tokushige *et al.* (U.S. Patent No. 5,866,634, “Tokushige”);

Claim 22 over Merritt in view of Pontaoe, and further in view of Bartlett (U.S. Patent No. 5,879,372, “Bartlett”);

Claim 23 over Merritt in view of Pontaoe, and further in view of Rhee *et al.* (U.S. Patent No. 5,752,974, “Rhee”); and

Claim 64 over Merritt in view of Pontaoe, and further in view of Egan (U.S. Patent No. 6,174,324, “Rhee”).

For reasons set forth below, Applicant respectfully submits that these rejections should be withdrawn.

Merritt

Merritt discloses “A mechanical cord lock forming a non-slipping loop in an elastic cord such as elastic bungee cord employed in a vehicle restraining net”. “The connector includes two releasably engageable parts one of which has concave sidewalls formed on opposite sides thereof and a central wall formed intermediate the concave sidewalls. The second part has spaced concave sidewalls each with a pair of depending legs formed on opposite end walls which when mated with the first connector part defines two tortuous paths through the connector parts which ensure that the elastic cord lengths that are placed therethrough [are] in a stretched position [and] remain in such position without slippage.” (Abstract).

“The cord lengths 19 and 21 each have a diameter which when fully stretched will fit in the tortuous path between the concave sidewalls and the I-shaped projection 66. While the cord lengths 19 and 21 are in the stretched position, the female and male sections 12 and 14 are brought together...” (C4L7-12).

“When in use pressure is applied to the storage net so as to stretch the loop 18. The cord lengths 19 and 21 will not be loosened relative to the lock as these cord lengths are pre-stretched and slippage is virtually eliminated.” (C4L25-29).

Initially, Applicant notes that Merritt does not disclose securing body tissue within a body, as recited in amended claims 1 and 71, and new claim 77. There is further no suggestion in either

Merritt or Pontaoe (discussed below) of implanting a fastener, and thus it would not be obvious to one skilled in the art to consider either reference.

The rejection notes that Merritt discloses glass filled nylon, and cites Anderson *et al.* (U.S. Patent Publication No. 2002/0183762) for disclosing glass filled nylon for implantation, specifically: “[0084] The main body 30 may have a cover constructed from a medical grade or biocompatible material. Suitable materials include steels and polymers such as polycarbonate and nylon (e.g. glass filled).” However, Anderson discloses the case of a *tool* (body 30), the tool *not* being implanted in a body. There is thus no suggestion or teaching in Merritt of biocompatibility of the fastener disclosed therein, at least for the purpose of implantation.

Additionally, Merritt does not secure an object by pressing the object *as* first and second sections are bonded together, or bonding first and second sections together *to* secure the object to the fastener, as recited in claims 1 and 71. New claim 77 contains similar recitations. In Merritt, *a combination* of both *a tortuous path*, and *a stretched elastic cord*, together reduce slippage of the cord. Merritt does not suggest or teach securing an object by pressing the object *as* energy is applied to separate sections, as is claimed in the instant invention.

Further, Merritt does not suggest or teach an extension *compressible to* a height as recited in claims 59 or 60, or changing a shape of a surface or extension of the fastener, as recited in new claims 75-77.

Pontaoe

Pontaoe discloses a “cord clamp” in which, “In some embodiments, a plurality of cord retaining teeth protrude into one of the passages, and in some embodiments one or both of the passages are devoid of cord retaining teeth and include a passage constriction for adjustably capturing a corresponding cord portion.” (Abstract).

“In FIG. 4, both channels 12, 14 include constricted portions therein, whereby the both cord portions captured by the housing are adjustably captured therein. In other embodiments, however, only one of the passages includes a constricted portion, and in still other embodiments one or more of the passages are configured to axially retain the cord.” (C3L34-41). “In another embodiment, a plurality of cord retaining teeth protrude into one or more of the passages to axially retain one or more cord portions disposed therein.” (C3L42-44).

The rejection admits that Merritt does not disclose an object extending through a fastener substantially unobstructed, but cites Pontaoe C3L34-41 (reproduced above) for same. Applicant notes, however, that in every embodiment of Pontaoe, the path is obstructed on one side or both by either a tortuous path or teeth, either of which are obstructions. It is unclear what Pontaoe is referring to when it is stated “in still other embodiments one or more of the passages are configured to axially retain the cord”. Only two methods are disclosed in Pontaoe for axially retaining the cord—a tortuous path or teeth. Thus, at least one of these methods must be used in order to axially retain a cord. Moreover, the cited portion of the abstract makes it clear, together with the rest of the specification, that at least one of these obstructing or non-linear methods of retention are always used.

Accordingly, Pontaoe does not cure the deficiencies of Merritt with respect to an object extending through the fastener substantially unobstructed, as recited in claims 1 and 71, or changing a shape of the fastener upon the application of energy, as recited in claims 59-60, and 75-77.

The rejection states that Merritt and Pontaoe fail to disclose the object being body tissue or metallic. The rejection further states that these elements would be obvious. Applicant respectfully disagrees. There is no suggestion or teaching in either reference to use a fastener therein in any context relating to retaining tissue in the body, or in any medical context. Such a use is only apparent using impermissible hindsight in light of the instant invention. Additionally, as both Merritt and Pontaoe require bending or piercing an object, there would be a teaching away from the use of a metallic or rigid object, as metal is inherently difficult or impossible to bend or pierce using a fastener of the type disclosed in Merritt or Pontaoe.

Hart, Tokushige, Bartlett, Rhee, and Egan are cited for disclosing a biodegradable material, a heat shrinkable material, viable cells, a pharmaceutical agent, and an ultrasonic end effector, respectively. Hart pushes one fastener part inside another, to bend and trap a suture filament. Egan bends to suture lengths within a fastener and then bonds the two lengths together using ultrasonic energy. The remaining references are not directly related to fasteners. Neither Hart nor Egan addresses the deficiencies of Merritt and Pontaoe as detailed above, as both references require, at least, that the sutures are obstructed within the fastener, where claims 1 and 71 require

the object to be unobstructed or linear. The references further do not suggest or teach securing an object as first and second fastener portions are bonded together, as recited in claims 1, 71, and 77, or by pressing an object between two fastener portions as the portions are being ultrasonically bonded, as recited in claim 77.

Accordingly, Applicant respectfully submits that claims 1, 71 and 77 are patentable over a combination of Merritt, Pontaoe, Hart, Tokushige, Bartlett, Rhee, and Egan. As claims 4-6, 8, 18-24, 49-70, and 74 depend from claim 1, and claims 72-73 and 75-76 depend from claim 71, these dependent claims necessarily include all the elements of their base claim. Accordingly, Applicant respectfully submits that the dependent claims are allowable over the cited references for at least the same reasons.

In light of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the §103 rejections.

Conclusion

In light of the foregoing remarks, this application is now in condition for allowance and early passage of this case to issue is respectfully requested. If any questions remain regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

A fee of \$26 for an additional claim is believed to be due. However, please charge any other required fee (or credit overpayments) to the Deposit Account of the undersigned, Account No. 500601 (Docket No. 782-A03-023)

Respectfully submitted,

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